

ABSTRACT

The invention relates to a steel composition having the following composition : C: 0.12-0.45 wt. % Si; 0.10-1.00 wt. % Mn; 0.50-1.95 wt. % S; 0.005-0.060 wt. % Al; 0.004-0.050 wt. % Ti; 0.004-0.050 wt. % Cr; 0-0.60 wt. % Ni; 0-0.60 wt. % Co; 0-0.60 wt. % W; 0-0.60 wt. % B; 0-0.01 Mo; 0-0.60 wt. % Cu; 0-0.60 wt. % Nb; 0-0.050 wt. % V; 0.10-0.40 wt. % N; 0.015-0.040 wt. % remaining: Fe and unavoidable impurities where the following conditions apply: 1) wt. % V x wt. % N = 0.0021 to 0.0120; 2) $1.6 \times \text{wt. \% S} + 1.5 \times \text{wt. \% Al} + 2.4 \times \text{wt. \% Nb} + 1.2 \times \text{wt. \% Ti} = 0.040$ to 0.080; and 3) $1.2 \times \text{wt. \% Mn} + 1.4 \times \text{wt. \% Cr} + 1.0 \times \text{wt. \% Ni} + 1.1 \times \text{wt. \% Cu} + 1.8 \times \text{wt. \% Mo} = 1.00$ to 3.50. The steel composition is highly suitable for use in the production of highly resistant, highly tenacious parts forged by a forging die without terminal quenching, which can be used as chassis parts for passenger cars and commercial vehicles.